Attachment 1

TS #1h1698
copy 7

6 January 1958

GUIDED MISSILES INTELLIGENCE

Presented by The Director of Central Intelligence to Congressional Committees in 1956 and 1957

19 JANUARY 1956. Joint Atomic Energy Committee, Subcommittee on Military Applications. Excerpts from transcript.

General: ... it is apparent that the Western Powers face a growing Soviet guided missile threat over the next several years. A threat to Western offensive capabilities is already beginning to appear in the form of increased Soviet air defense strength. This threat will probably soon be followed by improved Soviet offensive capabilities against US and Allied coastal areas and sea lines of communication, and in tactical operations. Later the threat will probably extend to all Allied base areas in Eurasia, and ultimately to the entire United States. p. 22

Short and Medium Range Ballistic: We have credible evidence of the Soviet development of short and medium range ballistic missiles capable of a range of several hundred miles but less than a thousand [miles].... The short range missile could have been available since 1954 .... The medium range missile could now be

available in limited quantities. However, only a low-yield 1/ nuclear warhead probably would be available .... p. 23

IRBM: Based primarily on a logical projection of demonstrated abilities in the medium range category, ... credible intelligence of the development of a 100-ton thrust propulsion unit, and some intelligence indicating a stated Soviet requirement for an IRBM of 1,600 nautical miles range, we estimate that the USSR could have such a missile in about two to three years .... A 1,400 n.m. version could possibly be ready for series production as early as 1957 .... it is estimated that the USSR could have a large-yield 2/ nuclear warhead available for this missile (either one) by 1959-1960 .... A low-yield 1/ warhead could now be available. pp. 26-27, 33

ICBM: ... Assuming a continuous and successful program ... we estimate that as soon as 1960-1961, the USSR could have progressed through the various developmental phases and have ready for series production an ICBM of this [5,500 n.m.] range .... we believe that high-yield 2/ nuclear warheads could also be available for this missile by these dates. The advent of such an ICBM would create an entirely new type of threat to the US. pp.34-35

Submarine-Launched: The USSR ... could already have available improved V-2 types with nuclear warheads of low 2/ yield. The USSR could

also have available a turbo-jet pilotless aircraft (non-ballistic guided missile) with improved range, speed, and accuracy. By 1958 we estimate that it could have a high-yield 6/ nuclear warhead ... p. 43

Surface-to-Air: ... We believe that it now has deployed, at least in the Moscow area, operational surface-to-air missiles ... we estimate these missiles to have an effective slant range of at least 35,000 yards at 50,000 feet altitude ... [and] ... that by 1957-1959 a new missile could be available with ... 60,000 feet altitude. A low-yield 7/ nuclear warhead which could be available in 1958 would greatly increase their kill probability .... We believe that ... improved missiles with ranges on the order of 100 n.m. ... [could be developed] ... sometime after 1960. pp. 45-46

Air-to-Surface: ... We estimate that in 1956-1957 an all-weather, subsonic missile with a range of 55 n.m. could become available for use against naval targets. The USSR has tested a low-yield 8/ nuclear warhead which could be carried by this missile .... In 1960, we estimate that an all-weather, supersonic air-to-surface missile with high-yield 9/ nuclear warhead could be ready for series production ... p. 47

Air-to-Air: ... There is very meager evidence of Soviet activities in this area .... We estimate that the USSR could develop in

1955 a guided rocket with infrared homing and in 1955-1958 an improved version with greater range.... In 1958-1959, the USSR could probably have a new, all-weather missile ... p. 48

28 JANUARY 1956. House Armed Services CIA Subcommittee. No transcript made. Same briefing papers used as for 19 January presentation excerpted above.

24 FEBRUARY 1956. Senate Armed Services CIA Subcommittee. No transcript made. Excerpt from CIA memorandum for the record.

Medium Range Ballistic: The Director explained that we had good evidence that the Soviets were now capable of launching a missile with a range of 900 miles, but that we had no proof that the Soviets had missiles with any greater range, although they would undoubtedly develop such a missile in time.

18, 23 and 24 APRIL 1956. Senate Armed Service Committee, Subcommittee on the Air Force ("Symington Committee"). Excerpts from transcript.

General: In 1947, the Soviets assembled several hundred V-1 missiles. They had also, during that year, fired 12 V-2 ballistic missiles at a new test range. The Soviets were assisted and instructed during these firings by a team of German military specialists. From the period 1947 to 1949, the Soviets were reported to have had on hand sufficient parts to assemble up to 100 V-2 missiles, using 25-ton and 35-ton thrust motors. In 1948, German specialists, by Soviet direction, also commenced design work on a 100 metric ton liquid rocket engine. pp. 122-123

Short and Medium Range Ballistic: A short range missile, with a range of 350 n.m., has probably been available since 1954. A medium range missile, capable of reaching the 350 to 1,000-mile bracket, could now be available in limited quantities, but there is as yet no evidence that such a missile has reached operational readiness .... We now have evidence that they have already tested several dozen missiles out to ranges of approximately 700 miles, the earliest test being in 1954. pp. 49-50, 123

IRBM: Based primarily on a logical projection of demonstrated Soviet abilities in the medium-range missile category, credible intelligence on the development of a 100-ton thrust propulsion

unit, and some intelligence indicating a stated Soviet requirement for an intermediate-range ballistic missile of 1,600 n.m. range, we estimate that the USSR could have such a missile in about two to three years. Large-yield nuclear warheads for ballistic missiles will probably be available in limited quantities in 1959-1960 .... A 1,600-mile version could possibly be ready for series production as early as 1957 ... [but]... would be cutting corners, and also the non-availability of a reasonably high-yield warhead would make that an unlikely thing for them to go into. pp. 62-65

ICBM: We also estimate that an inter-continental ballistic missile, with a range of 5,500 n.m., could be ready for series production in 1960-1961. That is our best estimate, and that ... date may be altered one way or the other as we get firmer intelligence ... p. 42

Submarine-launched: With regard to Soviet employment of missiles against the North American continent between now and 1959, we believe that submarine-launched missiles might be an important supplement to attacks by aircraft. These missiles could reach many important targets up to a distance of 500 n.m. from the launching submarines, though with decreasing accuracy at ranges over 200-250 n.m. p. 43

Surface-to-air: It is highly likely that the USSR will place increasing reliance on guided missiles for air defense use. Surface-to-air defense guided missile sites are currently being constructed in two rings around Moscow .... This anti-aircraft guided missile system, [which will] consist of 50 to 60 launching sites .... could be operational in late 1956. p. 86

Air-to-Air: Although there is little evidence of Soviet employment of air-to-air guided missiles, we estimate that such missiles could currently be available for operational use. The probable infrared guidance equipment would limit the use of these missiles to tail-case attacks in fair weather. In 1958-1959, the USSR could probably have an all-weather, higher speed air-to-air missile using a semi-active radar homing guidance system, which would permit more flexible employment. p. 87

23 JANUARY 1957. Joint Atomic Energy Committee. Excerpts from transcript.

25X1D0a

[redacted]

25X1D0a

[redacted]

Medium Range Ballistic: We do not know, and as far as I know, intelligence has not turned up any existing rocket sites in Eastern Germany ... or other satellites. It is possible that they have them there. They could hide them in the forests. The Germans did pretty well at hiding their rocket sites, you recall. Certainly, given the range we estimate they can achieve, they could easily reach England from these sites .... up to about 800 n.m. .... medium yield 10/ [warhead]. pp. 57, 73-74

Submarine-Launched: ... up to 500 n.m., subsonic speed ... [some confusion on this and subject passed over.] p. 74

19 JUNE 1957. Joint Atomic Energy Committee. Excerpts from transcript.

25X1D0a

[redacted]

General: We estimate that the Soviet guided missile program is extensive and enjoys a very high priority. We estimate that the USSR has the native scientific resources and capabilities to develop during

this period advanced types of guided missile systems, in all categories for which it has military requirements. ... p. 64

Short Range Ballistic: There is considerable evidence of Soviet development of short range surface-to-surface missiles, and we estimate that the USSR could probably have had available for operational use in 1954 ballistic missiles with the following maximum ranges — 75 n.m., 175-200 n.m., and 350 n.m. These types could be equipped with nuclear warheads. p. 67

Medium Range Ballistic: We have firm evidence that the USSR has flight-tested considerable numbers of missiles to a range of about 700 n.m. There is no evidence of flight tests to ranges greater than 700 n.m. Based on this data, we estimate that the USSR could probably have had a 700 n.m. maximum range ballistic missile for operational use in 1956. This missile could probably have a high yield[11] warhead in 1957. p. 67

IRBM: We also have firm evidence that in 1949 the USSR was interested in a 1,600 n.m. intermediate range ballistic missile (IRBM), and we believe it is a logical step in the Soviet program. In the absence of direct evidence, but based on their military need for a missile of this range, we estimate that the USSR is developing an IRBM, and that it could probably have such a missile in operation in 1959. ... would probably employ nuclear warheads with a high yield.[12] pp. 67-68

ICBM: We have no direct evidence that the USSR is developing an ICBM, but we believe its development has probably been a high priority goal of the Soviet ballistic missile program. We estimate that the USSR could probably have a 5,500 n.m. ICBM ready for operational use in 1960-1961. We believe that the USSR will seek to acquire a considerable number of ICBMs with high-yield 13/ nuclear warheads as rapidly as possible. p. 68

Submarine-Launched: ... Several reports indicate that the Soviets have submarines equipped for firing missiles from deck capsules. Khrushchev is reliably quoted as having said in May 1956 that guided missile submarines are the most suitable naval weapons and will receive emphasis in further development. The USSR could probably have had in operation in 1955 a subsonic turbojet missile capable of a maximum range of 500 n.m., and a supersonic missile of this range could probably be in operation in 1957. We estimate that this missile could now have a medium yield 14/ warhead ... A supersonic cruise-type missile capable of ranges up to 1,000 n.m. could probably be operational in 1962. With a vigorous program, the USSR might achieve an operational submarine-launched IRBM system sometime during the period 1964-1966. pp. 66-67

Surface-to-Air: We estimate that surface-to-air missile systems have one of the highest priorities among current Soviet military

programs. At Moscow, an extensive system of surface-to-air missile sites has been constructed, and all sites are probably now operational. This system can probably direct a very high rate of fire against multiple targets at maximum altitudes of about 60,000 feet and maximum horizontal ranges of about 25 n.m. During the period 1958-1961, surface-to-air systems with increased range and altitude capabilities for static defense of critical areas, and with low and high altitude capabilities for defense of static targets, field forces and naval vessels could probably become available for operational employment. ... Evidence obtained on facilities in the Moscow area led us to estimate that series production of surface-to-air guided missiles is now under way in the USSR, and that it will probably produce such missiles in large quantities. Nuclear warheads could now be incorporated into a limited number of surface-to-air missiles... pp. 64-65

Anti-ICBM: Some time between 1963 and 1966, the USSR could probably have in operation a surface-to-air system of some capability against the ICBM. p. 65

Air-to-Surface: In 1955 the USSR could probably have had a 20 n.m. subsonic air-to-surface missile available for operational use. In 1956-1957 a 55 n.m. subsonic missile could probably be available, and there is some evidence that such a missile has

reached at least final flight-test stage. A supersonic version of this missile could probably be available in 1958. These missiles, designed primarily as anti-ship weapons, could also be employed against isolated and well-defined radar targets on land. In 1961, a 100 n.m. supersonic missile could probably be available for employment by heavy bombers. Each of the above missile types could employ nuclear warheads. p. 66

✓ Air-to-Air: Despite a lack of significant intelligence, we estimate that the USSR has pursued the development of air-to-air missiles, and that it could now have in operational use a 2-3 n.m. range missile capable of tail-cone attacks in good weather. It is probable that the USSR could have a 5 n.m. all-weather missile operational in 1958 and a 15-20 n.m. all-weather missile, capable of employing a nuclear warhead, in 1960. p. 65

29 AUGUST 1957. Joint Atomic Energy Committee, Subcommittee on Military Applications. DDCI. Excerpts from transcript.

✓ Medium Range Ballistic...conclusive evidence of the testing of ballistic type missiles in considerable quantities up to ranges of about 700 n.m. We have also accumulated evidence, since you were last briefed by Mr. Dulles, that a few ballistic missiles have been test-fired to 900-1,000 n.m. range. p. 8

IRBM: [In answer to questions about validity of previously-estimated availability of 1,600 n.m. IRBM in 1959.] ... since the time we made that estimate we have not had evidences of actual firings to any 1,600 mile range. Therefore we are in the process of re-considering that [estimate].... The last estimate we gave you was that it would be operational in 1959 .... We have no basis for changing that at the present time. pp. 33-34

ICBM Test Firing: Our conclusion there is that the Soviets may either have actually fired a very long range ballistic missile without our having in fact detected it; or they have so far advanced their technology and testing that they feel fully confident of their ability to do so, as was the case with the 1953 thermo-nuclear statement.

25X1D4a [redacted] 25X1D4a

19 SEPTEMBER 1957. Joint Atomic Energy Committee, Subcommittee on Military Applications. DDCI by phone to Subcommittee Chairman, Senator Jackson. Excerpt from CIA memorandum for the record.

ICBM Test Firing: ... since the intelligence community had not made up its mind formally at the time General Cabell briefed the Subcommittee, he wished to advise Senator Jackson now that after full evaluation by the intelligence community, it was their belief that the Soviets had accomplished firing to the extent discussed previously in the briefing.

26-27 NOVEMBER 1957. Senate Armed Services Committee, Preparedness Investigating Subcommittee ("Johnson Committee").

The entire Soviet missile field was covered in this presentation. No excerpts have been made at this time, since the direct presentation is readily available (TS #104248).

INDEX